

Appendix F

Letter from Robert A. Frakes, Ph.D., to Jason Totoiu, Center for Biological Diversity, Re: opinion on impacts of construction and operation of migrant detention facility on the endangered Florida panther

To: Jason Totoiu, Center for Biological Diversity

From: Robert A. Frakes, Ph.D.

July 8, 2025

The Center for Biological Diversity requested my opinion on whether the construction and operation of a migrant detention facility at the site of the old proposed Jetport (Jetport) in Collier County is likely to impact the endangered Florida panther. The Jetport property, approximately 5000 acres in size, is located in a vast area surrounded by natural, public lands, within Big Cypress National Preserve and near Everglades National Park, important refuges for the Florida panther and many other listed and imperiled species. This opinion is based upon my professional knowledge and my previous work on panther habitat modeling (Frakes et al. 2015, Frakes and Knight 2021), and it is limited by the lack of site-specific information available in the public domain.

The lack of detailed information on the construction, possible expansion, and current and future operation activities is problematic and makes it difficult to assess the full extent of impacts to panthers. Impacts would be highly dependent upon factors for which little information is available, such as intensity of night time lighting, noise levels, new fencing, human activity on the site, predator or animal control, and increased air traffic. In addition, due to a scale back in the state monitoring program, panther telemetry monitoring near the site has not occurred since 2008. However, historical data and panther habitat modeling suggest that the area around the site is valuable to panthers and that panthers are probably present near the site. If panthers may be adversely affected by the funding or operation of the facility by an agency of the Federal government, then the U.S. Fish and Wildlife Service is required by the Endangered Species Act to be consulted and produce a biological opinion, based on the best available science.

The Jetport parcel falls within an area known as the panther Primary Zone, an area of high conservation value to the panther, designated almost 20 years ago by a team of panther experts to be protected to support the small panther population (Kautz et al. 2006). The USFWS' current Panther Recovery Plan defines the Primary Zone as "lands essential to the long-term viability and persistence of the panther in the wild" (USFWS 2008). Therefore, the detention facility is within an area long considered essential habitat for the panther.

More recent peer-reviewed science also shows that the Jetport parcel contains important habitat for adult breeding panthers. As part of a study of panther habitat use (Frakes et al. 2015), we estimated home ranges of 87 adult panthers using telemetry data from 2004 through 2013. During the years 2004 to 2008, the home ranges of four adult panthers (3

males and one female) included the location of the proposed facility (Figure 1). Based on this historical evidence and assuming panther densities and habitat conditions are similar today, disturbances from the proposed facility may impact at least four existing adult panther home ranges. The actual number affected may be higher because not all panthers (only about half) were radio-collared during the time frame of the study. Because panthers are expected to avoid approaching close to the site due to increased lighting, noise, and human presence, the possible impacts will be changes in the size or shape of several panther home ranges. Additionally, increased traffic on the access road to the facility may cause some panthers to avoid crossing the road, thus fragmenting any existing panther home ranges which may lie on both sides of the road, such as those shown in Figure 1. Changes to panther home ranges and decreases in prey abundance may also have harmful effects of increasing intraspecific aggression, a leading source of panther mortality (see USFWS 2008 for a fuller discussion).

As mentioned above, due to a scale back in the state panther monitoring program, no recent telemetry data are available in the area. However, recent habitat modeling suggests that panthers are almost certainly present near or on the site (of course, if the runway areas are currently fenced, this would exclude panthers from using those areas). In 2021, we published a panther habitat suitability map based on random forest modeling, intended to be used as a guide in panther recovery planning (Frakes and Knight 2021). The model uses landscape characteristics such as land cover, human population density, roads, hydrology, and forest edge to predict the relative probability of panther presence in an area. Values greater than about 0.34 indicate areas likely to be used as breeding habitat by adult panthers. As shown in Figure 2, the parcel being used for the detention center is surrounded by mid- to high-value panther habitat. Sensitivity analysis of model predictions showed that the presence of human populations, roads, and agriculture (other than pasture) had strong negative effects on the probability of panther presence (Frakes et al. 2015). This strongly suggests that noise, lighting, and the presence of large numbers of humans on the site will affect some adult panthers. The magnitude of effects and number of panthers affected cannot be predicted given the scarcity of information on the facility and lack of recent panther monitoring data.

In summary, historical data and panther habitat modeling suggest that the area around the site is valuable panther habitat. It is highly likely that panthers continue to be present at or near the site, and that operation of a detention facility there will have adverse effects on this endangered species.

Literature Cited:

Frakes, R.A., R.C. Belden, B.E. Wood and F.E. James. 2015. Landscape analysis of adult Florida panther habitat. PLoS ONE 10(7): e0133044.doi:10.1371/journal.pone.0133044.

Frakes, R.A. and M.L. Knight. 2021. Location and extent of unoccupied panther (*Puma concolor coryi*) habitat in Florida: Opportunities for recovery. Global Ecology and Conservation 26 (2021) <https://doi.org/10.1016/j.gecco.2021.e01516>.

Kautz R, Kawula R, Hoctor T, Comiskey J, Jansen D, Jennings D, et al. 2006. How much is enough? Landscape-scale conservation for the Florida panther. Biological Conservation 130: 118–133.

U.S. Fish and Wildlife Service. 2008. Florida Panther Recovery Plan (*Puma concolor coryi*), Third Revision. U.S. Fish and Wildlife Service. Atlanta, Georgia. 217pp.

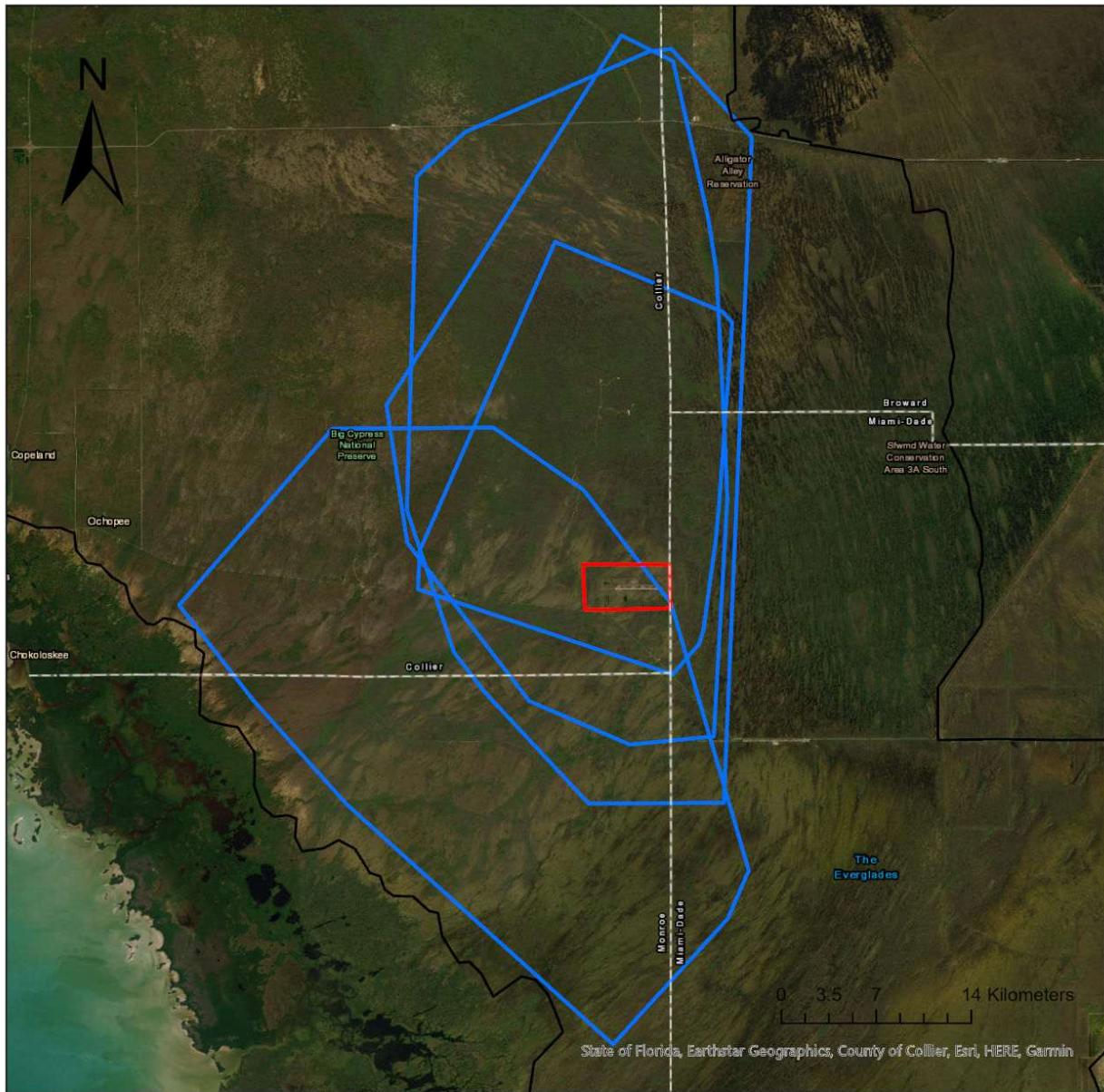


Figure 1. Florida panther home ranges that overlapped with the project site during 2004 to 2008. MCP home ranges of FP103, FP104, FP127, and FP152 are shown in blue.

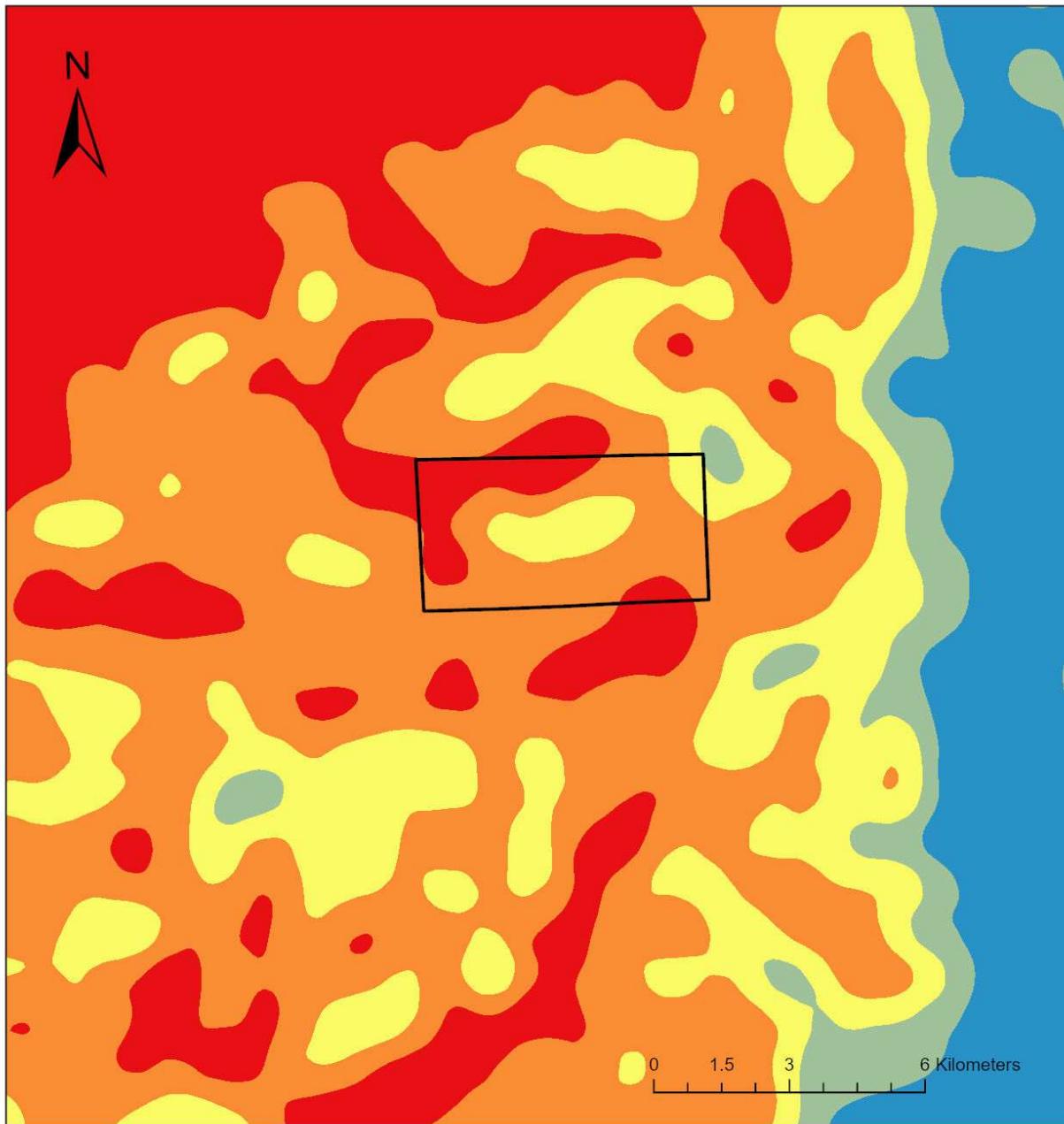


Figure 2. Panther habitat suitability (relative probability of presence) in the vicinity of the old Jetport parcel which is being converted to a detention facility.

r_FL_S_1500

<VALUE>

0.0 - 0.122
0.123 - 0.306
0.307 - 0.516
0.517 - 0.741
0.742 - 1.0
■ Jetport Parcel